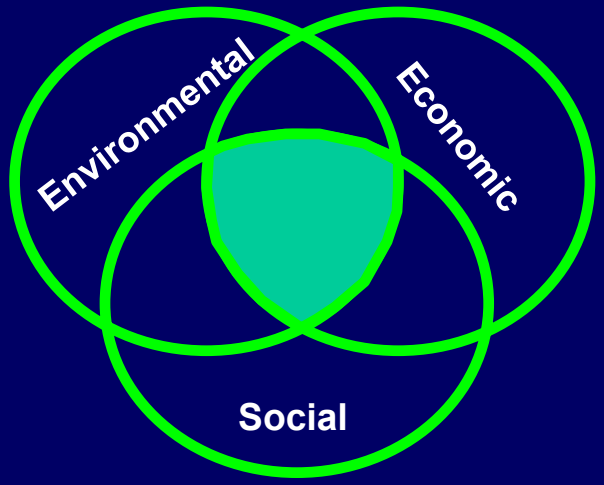
Washington State Department of Natural Resources



Sustainable Forest Management

Presentation
Board of Natural Resources
December Workshop 2003

Proposed Decision Process for Selecting the Preferred Alternative

Incorporates:

- Past Board discussion
- Modeling and technical analysis
- EIS results
- Public comment

Decision Process: Steps towards establishing a Preferred Alternative for Sustainable Forestry

December 2 BNR Workshop	January 8 BNR Workshop	February 2 BNR Workshop	February 17 BNR Workshop
•An example of compiling and modeling a "mix and match" alternative. • Review of the completed Policy & Outcome Matrix • Proposed timelines and processes leading to selection of the Preferred Alternative	• Overview of the DEIS public comments •BNR to create one or more "mix and match" draft alternatives for their consideration on 2/2/03.	• Present model results for the new BNR "mix and match" alternative(s) • BNR dialogue on the key policy features for the Preferred Alternative • BNR selects key policy features that provides necessary guidance for the DNR to construct the Preferred Alternative.	• Preferred Alternative model results presented to the BNR. • BNR dialogue on the policy considerations and implications of the Preferred Alternative. • Decision: BNR selects a Preferred Alternative, starting the Final EIS process. • Spring 2004: development of the model and the completion of the Final EIS. • June/July 2004: FEIS presented to BNR for final policy action.

Direction from BNR on the Proposed Decision Process

1. Identifying the key outcomes
2. Identifying key policy issues
3. Create discussion matrix to aid in the understanding of how policy issues influence key outcomes

What does the BNR see as Key Outcomes?

1. Revenue
2. Variability of income
3. Structurally Complex Forest Structure
4. Implementation considerations
5. Long-term standing inventory
6. Others?

Key Policy Choices for the BNR

1. Volume vs. Value Regulation
2. Type of Silviculture
3. Timber Harvest Flow
4. Ownership Groups
5. Amount of “on-base” land
6. Older Forests

Key Policy Choices for the BNR

1. Volume vs. Value Regulation
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6. Older Forests

These policy choices are independent of each other. A separate decision can be made for each. Thinking about them as individual decisions allows us to use them as building blocks for a preferred alternative.

However, the building blocks interact with each other and their combined impact on the outcomes will be modeled and analyzed in the Final EIS.

Alternative 1 ~ "Current DNR Operations"

Volume Regulation

(optimize volume subject to flow constraints)

Policy Issue line 1 — Alternative 1

Silviculture

- DNR current silviculture
  a balance of biological potential & economic productivity
- e.g., Douglas-fir on an average site (III) ≅ 60 yr. rotation

Policy Issue line 3 — Alternative 1

Timber Harvest Flow

- constrained relative even-flow +/- 25% of long-term for each ownership group (sustained forestry unit)

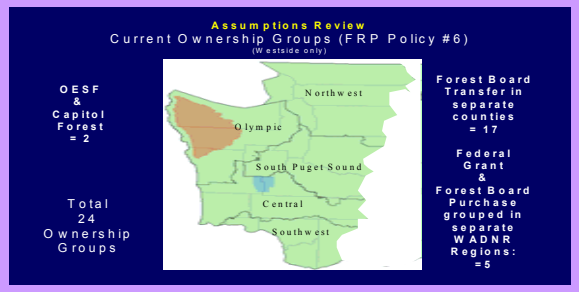
Policy Issue line 7 — Alternative 1

Older Forests

Baseline Protection
- Old growth research areas
- OESF landscape targets

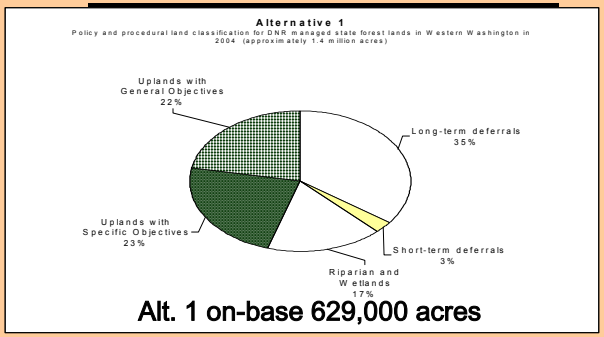
Policy Issue line 17 — Alternative 1

Ownership Groups (24)



Policy Issue line 11 — Alternative 1

Available "On-base" land



Policy Issue line 14 — Alternative 1

Alternative 2 ~ "HCP Intent"

Volume Regulation

(optimize volume subject to flow constraints)

Policy Issue line 1 — Alternative 2

Silviculture

- DNR current silviculture
  a balance of biological potential & economic productivity
- e.g., Douglas-fir on an average site (III) ≅ 60 yr. rotation

Policy Issue line 3 — Alternative 2

Timber Harvest Flow

- "relative" non-declining for each ownership group

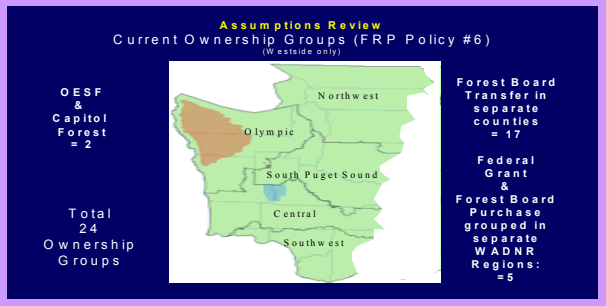
Policy Issue line 8 — Alternative 2

Older Forests

Baseline Protection
- Old growth research areas
- OESF landscape targets

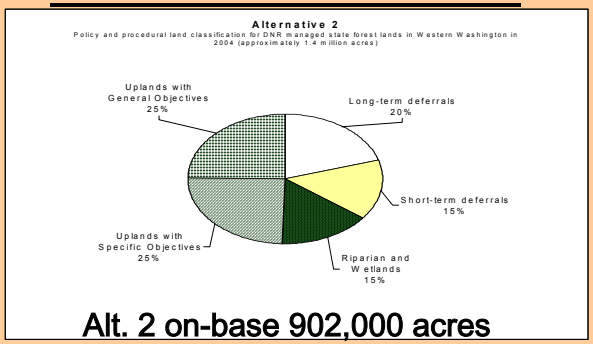
Policy Issue line 17 — Alternative 2

Ownership Groups (24)



Policy Issue line 11 — Alternative 2

Available "On-base" land



Policy Issue line 16 — Alternative 2

Alternative 3 ~ "Combined Ownerships"

Volume Regulation

(optimize volume subject to flow constraints)

Policy Issue line 1 — Alternative 3

Silviculture

- DNR current silviculture
  a balance of biological potential & economic productivity
- e.g., Douglas-fir on an average site (III) ≅ 60 yr. rotation

Policy Issue line 3 — Alternative 3

Timber Harvest Flow

- Relative unconstrained flow

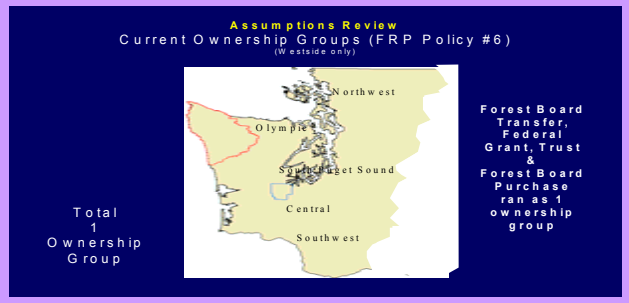
Policy Issue line 9 — Alternative 3

Older Forests

Baseline Protection
- Old growth research areas
- OESF landscape targets

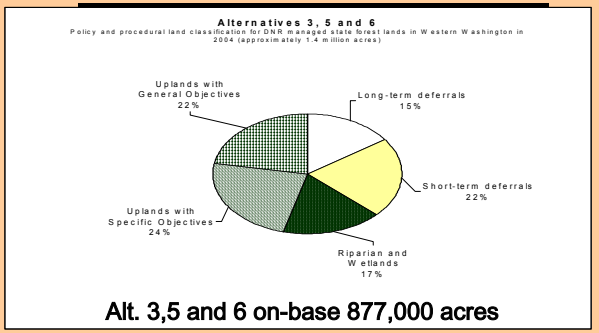
Policy Issue line 17 — Alternative 3

Ownership Groups (1)



Policy Issue line 13 — Alternative 3

Available "On-base" land



Policy Issue line 15 — Alternative 3

Alternative 4 ~ "Passive Management Approach"

Volume Regulation

(optimize volume subject to flow constraints)

Policy Issue line 1 — Alternative 4

Silviculture

- Minimum silviculture
  focus on biological productivity over economic potential
- e.g., Douglas-fir on an average site (III) ≅ 80 yr. rotation)

Policy Issue line 4 — Alternative 4

Timber Harvest Flow

- constrained relative even-flow +/- 25% of long-term for each ownership group (sustained forestry unit)

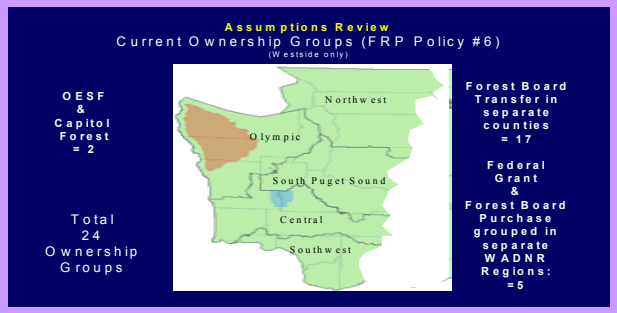
Policy Issue line 7 — Alternative 4

Older Forests

Baseline protection
Specific site protection
- Age-based: stands > 160 years in age deferred from harvest

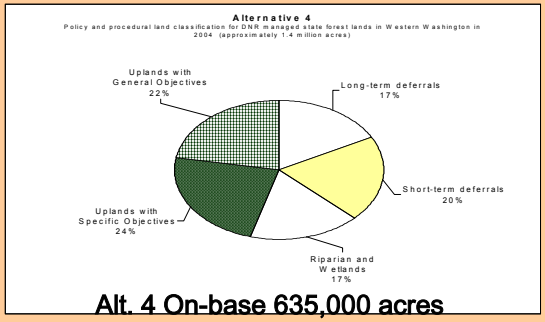
Policy Issue line 18 — Alternative 4

Ownership Groups (24)



Policy Issue line 11 — Alternative 4

Available "On-base" land



Policy Issue line 15 — Alternative 4

Alternative 5 ~ "Intensive Management Approach"

Value Regulation

(optimize value subject to flow constraints)

Policy Issue line 2 — Alternative 5

Silviculture

Intensive silviculture

- focus on economic potential over biological productivity
- e.g., Douglas-fir on an average site (III) ≅ 50 yr. rotation

Policy Issue line 5 — Alternative 5

Timber Harvest Flow

- Modulating
  - allow +/- 25% variation in timber harvest volume between decades

Policy Issue line 10 — Alternative 5

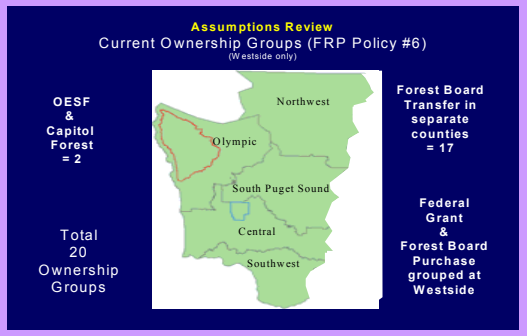
Older Forests

Baseline protection

- Landscape land targets
  - Structure-based: 10-15% of each HCP unit targeted to be in older forest condition

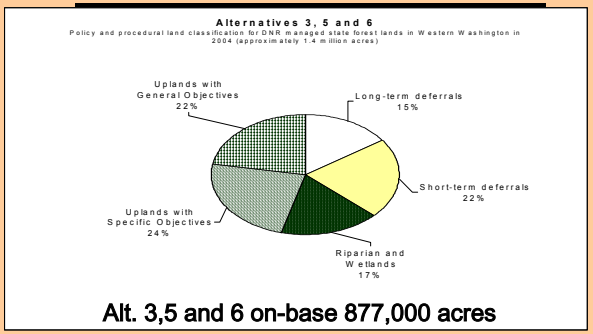
Policy Issue line 19 — Alternative 5

Ownership Groups (20)



Policy Issue line 12 — Alternative 5

Available "On-base" land



Policy Issue line 15 — Alternative 5

Alternative 6 ~ "Innovative Silvicultural Approach"

Value Regulation

(optimize value subject to flow constraints)

Policy Issue line 2 — Alternative 6

Silviculture

Intensive silviculture

- focus on economic potential over biological productivity
- e.g., Douglas-fir on an average site (III) ≅ 50 yr. rotation

Policy Issue line 5 — Alternative 6

Timber Harvest Flow

- Modulating
  - allow +/- 25% variation in timber harvest volume between decades

Policy Issue line 10 — Alternative 6

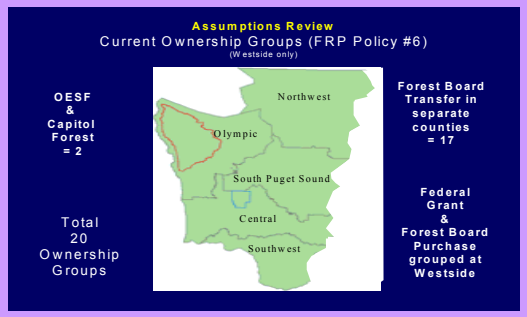
Biodiversity Pathways

In habitat areas (Riparian, NSO owl management areas and OESF = 520,000 acres)

- variable density thinning, longer rotations, treatments for under-planting, snags and down wood to accelerate habitat development

Policy Issue line 6 — Alternative 6

Ownership Groups (20)



Policy Issue line 12 — Alternative 6

Older Forests

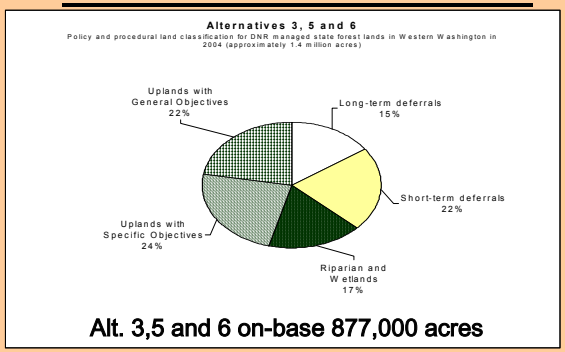
Baseline protection

- Landscape land targets
  - Structure-based: 10-15% of each HCP unit targeted to be in older forest condition

Policy Issue line 19 — Alternative 6

Alternative 6 ~ "Innovative Silvicultural Approach"

Available "On-base" land



Policy Issue line 15

Alternative 6

Matrix: Background Reference Material for Policy Choices

compared to current conditions and Alternative 1 projections

Policies that strongly influence revenue earnings are:
- Volume vs Value
- Silviculture
- Timber Harvest Flow
- Ownership Groups
- "Short-term" deferrals

Policies that strongly influence income variability:
- Timber Harvest Flow
- Ownership Groups

Policies that strongly influence the amount of structurally complex forest are:
- Silviculture
- "Short-term" deferrals

		a	b	c	d	g	f	g	h
		Outcomes							
	Policy Issues	Alternative	Revenue		Income variability	Amount of Structurally Complex forest beyond that required by the HCP	Implementation		Long-term standing inventory increases under Alt. 1
			Near-term	Long-term			Costs	Timing	
	Volume & Value								
1	Volume	1,2,3,4			neutral	neutral	same	same	neutral
2	Value	5,6	positive	positive	neutral	neutral	increase	delay	neutral
	Silviculture								
3	DNR current Silviculture	1, 2, 3	same	same	neutral		same	same	same
4	Minimum Silviculture	4	negative		neutral	increase	decrease	immediate	increase
5	Intensive Silviculture	5, 6	positive	positive	neutral	same	increase	delay	same
6	Bio Diversity	6	positive	positive	neutral	increase	increase	delay	same
	Timber Harvest Flow								
7	Even-flow	1,4				neutral	neutral	neutral	neutral
8	Relative Non-declining	2	Slight "+"		same	neutral	neutral	neutral	neutral
9	Relatively Unconstrained	3	Big "+"		Big "+"	neutral	neutral	neutral	neutral
10	Modulating	5,6	Big "+"		Slight "+"	neutral	neutral	neutral	neutral
	Ownership Groups								
11	24	1,2,4	same		same	neutral	neutral	neutral	neutral
12	20	3,5,6	Slight "+"		Slight "+"	neutral	neutral	neutral	neutral
13	1	3	Big "+"		Big "+"		neutral	neutral	neutral
	Available "On-base" land								
14	Maintain procedures & deferrals	1	negative	negative	neutral	Slight "+"	decrease	immediate	increase
15	Change procedures & deferrals	3,4,5,6	Slight "-"	positive	neutral		decrease	immediate	neutral
16	Change procedures	2	positive	positive		neutral	increase	immediate	neutral
	Older Forests								
17	Basic Protection Only	1,2,3	neutral	neutral	neutral	neutral	neutral	neutral	neutral
18	Specific site Protection	4	neutral	neutral	neutral	neutral	neutral	neutral	neutral
19	Landscape Targets	5,6	neutral	neutral	neutral	neutral	neutral	neutral	neutral

Combining policies can also be used influence desired outcomes, however, the interactions are often unpredictable, hence the use of the model to help identify unknown consequences.